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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,336	09/11/2006	Alain Wagner	128851	4836
92793	7590	06/15/2010	EXAMINER	
Oliff & Berridge, PLC			ADAMS, MICHELLE	
P.O. Box 320850			ART UNIT	
Alexandria, VA 22320-4850			PAPER NUMBER	
			1797	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction92793@oliff.com

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### Office Action Summary

**Application No.**

10/587,336

**Applicant(s)**

WAGNER ET AL

**Examiner**

Michelle M. Adams

**Art Unit**

1797

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 10-19 and 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 20-25 and 27 is/are rejected.
- 7) ☒ Claim(s) 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's election with traverse of Group I, claims 1-9, 20-25, and 27, in the reply filed on 26 May 2010 is acknowledged. The traversal is on the ground(s) that the subject matter of all claims is sufficiently related that a search of all claims could be made without serious burden, citing MPEP § 803, which pertains to applications filed under 35 U.S.C. 111. This is not found persuasive because the instant application is filed 35 U.S.C. 371. The restriction is proper because the groups of inventions do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Groups I and II overlap in scope with the subject matter of a database to select a catalyst for a reaction. However, this subject matter is at least rendered obvious by Kibby (US 2002/0182735; IDS), see abstract, as noted in the Written Opinion of the International Searching Authority. Accordingly, Groups I and II lack a common special technical feature that makes a contribution over the art.

The requirement is still deemed proper and is therefore made FINAL.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.

- (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
  - (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
  - (i) DETAILED DESCRIPTION OF THE INVENTION.
  - (j) CLAIM OR CLAIMS (commencing on a separate sheet).
  - (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
  - (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).
2. The disclosure is objected to because of the following informalities: the specification does not contain a section labeled "Brief Description of the Drawings."
- Appropriate correction is required.

#### *Claim Objections*

3. Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitations of claim 22 are found in claim 1, stage c.

#### *Claim Rejections - 35 USC § 112*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-9, 20-25, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- Claims 1, 2, 3, and 27 recite the limitations "the same reactivity probe" and "each" in stage a.
- Claims 1, 2, 3, and 27 recite the limitation "the reactivity probe in the database" in stage c.

Claims 1, 2, and 27 recite the limitation "the various reaction products obtained from this reactivity probe" in stage c.

Claim 1 recites the limitation "the reaction units," "the base," "the bonds of at least one reaction unit," and "the analytical results of the reaction media" in stage c.

Claims 3 and 24 recite the limitation "the influence of the structural environment of a listed reaction unit on its reactivity."

Claim 7 recites the limitations "the group of the results" and "the conversions."

Claim 21 recites the limitation "the reaction medium in which it was tested for its catalytic activity."

Claim 25 recites the limitations "the catalysts listed according to different reaction conditions," "the acidity," "the pressure," and "the presence of solvents."

There is insufficient antecedent basis for these limitations in the claims.

Claim 2 recites the limitation "information is associated with each unit listed, in particular on the states of the bonds, targeted at describing the degree of reactivity of the bonds which are associated with it" in stage c. The phrase "in particular" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. The phrase "targeting at" renders the claim indefinite because it is unclear whether information actually describes the degree of reactivity of the bonds which are associated with it.

Claim 9 recites the limitation "...for the formation or breaking of bonds, in particular..." The phrase "in particular" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

Claim 25 recites the limitation "... to different reaction conditions, in particular..." The phrase "in particular" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

Claim 22 recites the limitation "information is associated with each unit listed targeted as describing the state of the bonds which are associated with it." The meaning of this limitation is unclear.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-9, 20-22, 24, 25, and 27** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Studer (Chem. Commun. 1999).

Regarding claims 1-3, 5, 8, 22, 24, and 27, Studer teaches a method for creating a database which makes it possible in particular to select at least one catalyst suitable for a reaction, this method comprising the following stages:

a) preparing a plurality of different reaction media comprising the same reactivity probe (Table 2, pyruvaldehyde dimethyl acetal) and each comprising at least one catalyst, the reactivity probe comprises at least one reaction unit (various functional groups of the starting material),

b) analyzing, by a liquid or gas chromatography method, each reaction medium after reaction (GLC, HPLC, Table 1 footnote a),

c) assigning a result of the analysis according to stage b) to the reactivity probe in the database, this result characterizing the different reaction products obtained from this reactivity probe (the reaction products are the R or S enantiomers, Tables 1 and 2, and the various alcohol products of Table 1), the database being a relational database comprising a first entity in which is recorded information relating to the reaction units listed in the base (the functional groups of compounds with R<sup>1</sup> and R<sup>3</sup>, Table 1; the functional groups of pyruvaldehyde dimethyl acetal and its hydrogenated product, Table 2), a second entity comprising information relating to the state of the bonds of at least one reaction unit listed in the first entity (Ee, Tables 1 and 2), a third entity in which is recorded information associated with the different reaction media (solvent/modifier, Table 2) and at least one fourth entity in which is recorded information related to the analytical results of the reaction media on conclusion of a reaction (Rate, Tables 1 and 2);

reaction units being listed individually in the database, the units being present on the reactivity probes (R<sup>1</sup> and R<sup>3</sup>, Table 1; pyruvaldehyde dimethyl acetal, Table 2), and for at least a portion of the reaction units listed, information is associated with each unit listed, in particular on

the states of the bonds (Ee, Tables 1 and 2), targeted at describing the degree of reactivity of the bonds which are associated with it (Rate, Tables 1 and 2);


the database comprising information which informs about the influence of the structural environment of a listed reaction unit on its reactivity ( $R^1$  and  $R^3$ , Table 1; pyruvaldehyde dimethyl acetal, Table 2).

Regarding claim 4, Studer teaches that the plurality of different reaction media comprises at least two reaction media comprising different catalysts (Table 2).

Regarding claim 6, Studer teaches that stages a) to c) are repeated for a plurality of different reactivity probes (Table 1) and/or a plurality of different reaction media (Table 2).

Regarding claim 7, Studer teaches that for one reactivity probe at least, a file is generated collating the group of the results covering all the conversions which have been carried out on said probe (Tables 1 and 2).

Regarding claim 9, Studer teaches that the reaction media are chosen in order to carry out at least one of the following reactions: reactions for breaking of bonds, in particular  $-\text{CO}$  (Table 1 scheme).

Regarding claim 20, Studer teaches that the reaction unit is chosen from  ,  $\text{C}-\text{O}$  (Table 1 scheme).

Regarding claim 21, Studer teaches that the database comprises, for each catalyst listed, information relating to the reaction medium in which it was tested for its catalytic activity (Table 1 and 2 footnotes; Solvent/Modifier, Table 2).

Regarding claim 25, Studer teaches that the database comprises data which inform about the activity of a portion at least of the catalysts listed according to different reaction conditions, in particular the temperature of the reaction medium, the acidity, the pressure, the presence of solvents or the analytical method (footnotes, Tables 1 and 2).

### *Claim Rejections - 35 USC § 103*

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1797

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over Studer.

Although Studer teaches integer values and low values for enantiomeric excess (the chiral state of the bonds) (Table 2), Studer does not teach integer values ranging from 0 to 3. Examiner takes Official Notice that determination of reaction conditions that provide enantiomeric excess of 0, 1, 2, or 3 percent is well known. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The discovery of an optimum value of a known result effective variable, without producing any new or unexpected results, is within the ambit of a person of ordinary skill in the art. See *In re Boesch*, 205 USPQ 215 (CCPA 1980) (see MPEP § 2144.05, II.). For the benefit of identifying which reaction conditions only provide enantiomeric excess of 0, 1, 2, or 3 percent, it would



have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Studer wherein the state of the bonds is an integer ranging from 0 to 3.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle M. Adams whose telephone number is (571) 270-5043. The examiner can normally be reached on M-Th, alternating F; 9:00 A.M.-6:30 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Y. Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

6/10/2010

/Yelena G. Gakh/  
Primary Examiner, Art Unit 1797

/Michelle M. Adams/  
Examiner, Art Unit 1797